

Remarks

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 1-14 are currently pending in the application; Claims 1-9 and 11 having been amended, and new Claims 12-14 having been added, by way of the present response.

Initially, Applicants express thanks for the Examiner's indication that dependent Claim 5 recites allowable subject matter, such that the dependent claim, although currently objected to, would be allowable if rewritten in independent form. In response, Applicants have so-rewritten Claim 5. Applicants have further amended the newly independent claim in a non-narrowing manner to remedy potential informalities, and to place the claim in better conformity with standard U.S. practice. Thus, Applicants respectfully request the allowance of newly independent Claim 5.

Applicants further express thanks for the Examiner's indication that dependent Claim 3 would be favorably considered if amended to recite that a number of layers are staggered to create a damper of variable thickness. In response, Applicants have rewritten Claim 3 in independent form, and have amended the claim in accordance with the Examiner's helpful suggestion, as well as to remedy potential informalities and to place the claim in better conformity with standard U.S. practice. For the reasons discussed in detail below, Applicants respectfully request that the rejection of newly independent Claim 3 be withdrawn and the newly independent claim allowed.

In the outstanding Office Action, Figure 10 was required to be designated by a legend such as "Prior Art." In response, as shown in the attached replacement sheets, Applicants have so-designated the figure.

In the Office Action, the drawings were objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) because they did not include reference sign 110 mentioned in the description. In

response, as also shown in the attached replacement sheets, Applicants have amended Figures 1, 2, 3, 5, and 8 to indicate non-limiting examples of a space 110.

Thus, for the above reasons, Applicants respectfully request that the objections to the drawings be withdrawn.

In the Office Action, a new title indicative of an invention to which claims are directed was required. In response, Applicants have amended the title to state "OUTER CASING COVERING GAS TURBINE COMBUSTOR."

In the Office Action, Claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Publication No. 11-062549 to Sunao et al. (Sunao). Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,199,936 to Cowan et al. (Cowan). Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sunao in view of either U.S. Patent No. 4,244,178 to Herman et al. (Herman) or U.S. Patent No. 4,195,475 to Verdouw. Applicants respectfully request that the rejections of the claims be withdrawn for the following reasons.

As stated above, independent Claims 1 and 3 have been amended. Further, dependent Claims 2, 4, 6-9, and 11 have been amended in a non-narrowing manner to remedy potential informalities and to place the claims in better conformity with standard U.S. practice. Applicants respectfully assert that support for the changes to the claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.

The present invention is directed to gas turbine combustors covered by casings. Independent Claim 1 recites a sheet-like vibration damper having at least one thin plate, which resonates with a vibration of air in an intake chamber to absorb energy of the air vibration. The damper is attached to an inner wall of the casing by an attaching member with a vacant space therebetween. Independent Claim 3 recites a sheet-like vibration damper, which resonates with

a vibration of air in the intake chamber to absorb energy of the air vibration. The damper is attached to an inner wall of the casing by an attaching member with a space therebetween. The sheet-like vibration damper includes a multi-layered thin flat plate. The layers are staggered to create the damper of variable thickness.

Regarding the rejections of independent Claim 1, an English language abstract of which is enclosed for the Examiner's convenience, Sunao is directed to a combustor. As shown in Figure 4, for example, of Sunao, a sound absorbing material holder with perforated plates 15 is provided between an extended pipe 13 and a fuel nozzle 3. An interior of the sound absorbing material holder is filled with sound absorbing material 14.

However, Applicants respectfully assert that Sunao does not teach the claimed features of a vacant space between a damper and a casing, as recited in independent Claim 1. Rather, Sunao shows and states that the interior of the sound absorbing material holder is filled with the sound absorbing material 14, for example.

Specifically, independent Claim 1 recites "a sheet-like vibration damper . . . is attached to an inner wall of the casing by an attaching member with a vacant space therebetween." Thus, Applicants respectfully request that the rejection of independent Claim 1 under 35 U.S.C. § 102(b) in view of Sunao be withdrawn.

Cowan is directed to a gas turbine engine combustion noise suppressor. As shown in Figure 1, for example, of Cowan, a turbofan engine includes a fan assembly 11 mounted forwardly of a fan duct within a forward portion of an engine cowling 13. A combustor 19 includes a burner cavity mounted within a surrounding airflow duct that receives compressed air from a compressor 16.¹ Figures 2-5 show noise suppressors utilized in the combustor 19.²

¹ Column 4, lines 7 to 15.

² Column 3, lines 39 to 58.

However, Applicants respectfully assert that Cowan does not teach the claimed features of a damper having at least one thin plate resonating with a vibration of air in an intake chamber, as recited in independent Claim 1. Specifically, Applicants respectfully assert that Cowan does not show or state a noise suppressor in an intake chamber (e.g., the engine cowling 13), but rather describes noise suppressors used in the combustor 19. Thus, Applicants respectfully request that the rejection of independent Claim 1 under 35 U.S.C. § 102(b) in view of Cowan be withdrawn.

Applicants respectfully assert that the outstanding grounds of rejection of independent Claim 1 have been overcome. Thus, Applicants respectfully request the allowance of independent Claim 1.

Regarding independent Claim 3, Applicants respectfully assert that none of Sunao, Herman, and Verdouw, whether taken alone or in combination, teaches or suggests the claimed features of a damper including a multi-layered thin flat plate, the layers staggered to create the damper of variable thickness, as recited in the independent claim. Specifically, independent Claim 3 recites “the sheet-like vibration damper comprises a multi-layered thin flat plate, the layers staggered to create the damper of variable thickness.” Thus, Applicants respectfully request that the rejection of independent Claim 3 under 35 U.S.C. § 103(a) be withdrawn and the independent claim allowed.

Applicants respectfully assert that dependent Claims 2 and 4 are allowable for at least the same reasons as independent Claims 1 and 3, from which they depend, as well as for their own features. Thus, Applicants respectfully request that the rejections of dependent Claims 2 and 4 under 35 U.S.C. §§ 102(b) and 103(a) be withdrawn, and the dependent claims allowed.

Applicants further respectfully assert that dependent Claims 6-11, which were withdrawn from consideration, are allowable for at least the same reasons as independent Claim 1, from which they depend, as well as for their own features. Thus, Applicants

respectfully request that dependent Claims 6-11 be considered on the merits, and the dependent claims allowed.

Regarding new independent Claim 12 and new dependent Claims 13 and 14, Applicants respectfully assert that support for the new claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added. Applicants further respectfully assert that the claimed features recited in new Claims 12-14 are not taught or suggested by the references of record. Specifically, Applicants respectfully assert that none of Sunao, Cowan, Herman, and Verdouw, whether taken alone or in combination, teach or suggest the claimed features of a damper including a first section and a second section having a thickness greater than the first section, as recited in the new claims. Thus, Applicants respectfully request the allowance of new Claims 12-14.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-14 is earnestly solicited.


Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

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Respectfully submitted,

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